



WORLD
LAND
TRUST

Reforesting Brazil's Reserva Ecológica de Guapiaçu

Our Plant a Tree project
with partner REGUA

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Country: Brazil

Partner/Organisation:
REGUA

Biome

Tropical and subtropical moist
broadleaf forests

Ecoregion

Serra do Mar coastal forests

Habitats

Set just 80km to the northeast of the Brazilian city of Rio de Janeiro, the REGUA reserve mainly features mature forest and recovering secondary forest areas, along with patches of pastureland which are being restored through an active reforestation programme. Forest streams and a wetland area are other important habitats.

Project summary

The Reserva Ecológica de Guapiaçu (REGUA) safeguards some of the last remnants of Brazil's Atlantic Forest. Since 2001, the WLT partner has been protecting the Guapiaçu Watershed forests, growing to directly own 16,700 acres (6,785 ha) as of 2019 and managing a further 18,900 acres (7,650 ha) in partnership with others.

Over the years at REGUA, this safeguarding of habitats has taken place alongside reforestation work. Since 2001, 500,000 native trees of 160 different species have been grown at local nurseries and planted to restore 617 acres (250 ha) of habitats. WLT has been supporting these restoration efforts since 2006 and will continue to do so through this Plant a Tree project, with plans to fund 66,680 trees between 2021 and 2024 so that 100 acres (40 ha) can be restored.

This is locally driven reforestation, starting with the collection by REGUA's rangers of native tree seeds from within the reserve. The seedlings, a mix of 250 geo-referenced local species, are nurtured at REGUA's purpose-built tree nursery, planted by field teams employing local people and monitored every three to four months in the first two years. The resulting restoration of cleared pastures benefits REGUA's staggering biodiversity – reconnecting forest fragments, strengthening soils, reducing the area of cleared land available for urban expansion – but also the area's communities, unlocking new livelihoods (see next page) for local people.

Main threats to the area

The Atlantic Forest is one of the most threatened forest regions in the world. Only 7% of this once-vast forest – 2% in the case of primary forest – remains standing and in Guapiaçu, the declaration of protected areas such as Serra dos Órgãos National Park or the Três Picos State Park has not saved the habitats from encroachment. Large swathes within these parks remain privately owned, bringing small farms and houses to the area. This has resulted in forest clearance for pastures and cattle grazing, impacting water quality as soil erosion and run-off worsens. In addition, past hunting pressures have already removed several key species from all but a few protected areas. Today, while less commonplace, the hunting of larger mammals (tapirs) and birds (curassows and guans) remains a threat, particularly close to settlements.

Southern Woolly Spider Monkey



Lowland Tapir



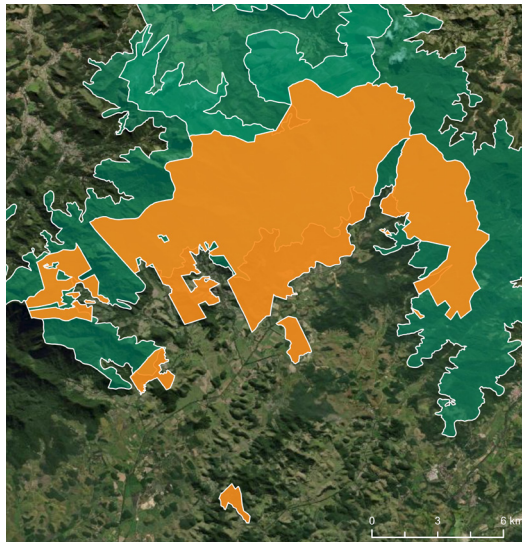
Key species¹

Southern Woolly Spider Monkey or mურიკი (*Brachyteles arachnoides*, CR), Lowland Tapir (*Tapirus terrestris*, VU), Crowned Solitary Eagle (*Buteogallus coronatus*, EN), Golden-tailed Parrotlet (*Touit surdus*, VU), Central Humming Frog (*Chiasmocleis lacrimae*, EN), Brazilian Snake-necked Turtle (*Hydromedusa maximiliani*, VU).

¹ The International Union for the Conservation of Nature (IUCN) Red List of Threatened Species includes categories of Critically Endangered (CR), Endangered (EN), Vulnerable (VU), Near Threatened (NT) and Least Concern (LC)

Local communities

REGUA has worked since their foundation to ensure conservation involves and benefits communities, and this tree-planting project is no exception. Local people are employed as part of the reforestation efforts and share land stewardship responsibilities through management of the valley's natural resources. Job creation aside, the benefits range from ecosystem services – such as higher drinking water quality and ecotourism – to a green tax rebate (*ICMS Verde*) that the area's municipalities enjoy based on the protected acreage, a benefit that rises as REGUA grows to protect and restore new land.



REGUA Reserve
Protected Area



Global prioritisation

The Atlantic Forest has been listed as one of the top five global conservation hotspots, owing to its mix of high levels of species richness, species endemism, volume of endangered species and small fraction of forest cover still standing.

Biodiversity

The Atlantic Forest is one of the most important biogeographical regions of the Neotropics, with an astounding number of species of plants (around 20,000), birds (nearly 1,000), amphibians (nearly 500), reptiles (300+) and mammals (260+). The level of endemism is high, as 44% of all plant species – including 3,200 tree species – and 30% of the bird species have only been found here. At 400 tree species per hectare, what forest is left intact is highly diverse and supports a myriad of endemic bryophytes, mosses, and invertebrates, with discoveries occurring regularly. Within REGUA's reserve limits, surveys have documented 479 bird species (120 of them Atlantic Forest endemics); 204 dragonfly and damselfly species of the Odonata order; 73 amphibian and 37 reptile species; and mammals like the Southern Woolly Spider Monkey or mურიკი, a Critically Endangered species thought to number fewer than 1,500 individuals worldwide.

Main methods for restoration

Tree seedlings are the most effective restoration approach but also the most natural in a region like Guapiaçu, where the original vegetation is sub-tropical rainforest rather than grasslands.

Partner/NGO

A WLT partner since 2006, REGUA was established in 2001 as a Brazilian non-profit with the aim of protecting and restoring habitats within the Guapiaçu catchment. It was founded with a strong focus on science, both in terms of documenting the resident wildlife and its response to conservation but also in its efforts to host universities and studies so that knowledge of the Atlantic Forest can be improved and shared. This scientific drive – with hundreds of students visiting annually before the COVID pandemic struck – comes alongside a focus on ecotourism, which REGUA has successfully harnessed as an income source that sustains the management and conservation of the reserve.

UN Sustainable Development Goals advanced by the REGUA project

